

NOSKOV, A.D., assistant

State of phosphorus-calcium metabolism in the initial form of  
parodontosis. Stomatologiya 41 no.4:15-16 Jl-Ag '62. (MIRA 15:9)

1. Iz kafedry terapevticheskoy stomatologii (zav. - prof. S.I.Vays)  
Irkutskogo meditsinskogo instituta.  
(GUMS—DISEASES) (CALCIUM METABOLISM) (PHOSPHORUS METABOLISM)

RODION, A.P.; TIGONIN, G.I.

Gene characterization of the distribution of rare metal deposits  
in southern Bygalla and their genetic types. Trudy BNTI no.9:  
33-43 '62 (MIRA 18:2)

MOSKOV, A.I.

Measuring the discharge of mountain rivers. Meteor. i gidrol.  
no.8:47-48 Ag '60. (KIRA 13:8)  
(Stream measurements)

NOSKOV, A.I.

Mechanization of mounting operations. Mashinostroitel' no.3:3-5  
Mr '65. (MIRA 18:4)

NOSKOV, A.I.

Methodology for determining the economic efficiency of mechanization  
and automation in machinery manufacturing. Nauch.trudy MIEI  
no.18:173-176 '61. (MIRA 15:2)  
(Machinery industry) (Automation)

NOSKOV, A.I.

Efficient equipment for working areas. Mashinostroitel' no.6:  
34-35 Jo '6 (MIRA 16:5)  
(Factory management)

NOSKOV, A.I.

Strengthening machine-tool beds and reconditioning worn-out parts  
with T15K6 hard alloy. Mashinostroitel' no.1:16-17 Ja '63.  
(MIRA 16:2)  
(Machine tools--Maintenance and repair)

NOSKOV, A.I.

Mechanization of auxiliary work. Mashinostroitel' no.4:5-8  
Ap '63. (MIRA 16:5)  
(Technological innovations)



NOSKOV, A.I.

Mechanization of conveying operations. Mashinostroitel' no.5:  
12-13 Ky '63. (MIRA 16:7)

(Conveying machinery)

NOSKOV, A.I., inzh.; PLETNEV, G.P., kand.tekhn.nauk; SKREBUSHEVSKIY, B.S., inzh.

Study of a block consisting of a TP-80 boiler and VPT-50 turbine in sharply varying mode of operation. Izv. vys. ucheb. zav.; energ. 7 no.8:53-57 Ag '64. (MIRA 17:12)

1. Moskovskiy ordena Lenina energeticheskoy institut.

NOSKOV, A.I., inzh.; ROTACH, V.Ya., kand. tekhn. nauk, dotsent

Determination of the transfer function of a controlled object taking into account its time characteristic. Izv. vys. ucheb. zav.; energ. 8 no.1:75-82 Ja '65.

(MIRA 18:2)

1. Moskovskiy ordena Lenina energeticheskiy institut.

NOSKOV, A.I., kand. ekon. nauk

Evaluation and analysis of the economic efficiency of overall  
automation of production processes. Mekh. i avtom. proizv.  
19 no. 10:31-35 0 '65. (MIRA 18:12)

NOSKOV, A.I., inzh.; ROTACH, V.Ya., dotsent

Approximation of the time characteristic of an object using  
an aperiodic first-order link with delay. Izv. vys. ucheb.  
zav.; energ. 7 no. 7:99-102 J1 '64 (MIRA 17:8)

1. Moskovskiy ordena Lenina energeticheskiy institut. Pred-  
stavlena podsektseyey avtomatizatsii teplovykh protsessov.  
Nauchno-tekhnicheskogo Soveta.

NOSKOV, A.I., Cand. of Veterinary Sciences  
"Treatment of diarrhea in piglets-sucklings."  
SO: Vet. 24 (7) 1947, p. 15

NOSKOV, A. I.

Aug 1947

USSR/Medicine - Lymphangitis  
Medicine - Epizootic Diseases

"Cultivated Mushrooms *Histoplasma farcinosum* as Propagators of Epizootic Lymphangitis,"  
V. P. Koroleva, Chief Research Collaborator, A. I. Koskov, Candidate in Veterinary  
Sciences, N. V. Syehkov, Veterinarian, Kh. A. Kshilovyan, Senior Research Collaborator,  
All-Union Scientific Research Laboratory for the Study of Toxic Mushrooms, 2 pp  
[orig.]

"Veterinariya" No 8

Intracutaneous and subcutaneous inoculations of *Histoplasma farcinosum* culture into horses gave a typical clinical aspect of the propagation of various types of epizootic lymphangitis. The incubation period was exactly two months. The most effective method for contamination was by rubbing mushroom culture into scarified skin. Blastospores (cryptococcus) appear in the organs of the horse much sooner than the first clinical symptoms of the disease. The transformation of the mycelium stage of the mushroom into the blastospore stage occurs within a period of 20 days after subcutaneous inoculation of the mushroom culture.

PA 36T53

\* Dzhiblovyan, Kh. A

NOSEOV, A. I.

PA 31/49T70

USSR/Medicine - Epizootic Diseases  
Medicine - Bronchopneumonia, Therapy

Jun 48

"Enzootic Bronchial Pneumonia in Young Pigs," A. I.  
Noskov, Cand Vet Sci, 2 pp

"Veterinariya" No 6

Discusses epizootiology, therapy, and prophylaxis of  
subject disease.

31/49T70



NOSKOV, A. I.

"The influence of chemical and physical factors on certain toxic and pathogenic fungi."

Zhur. Mikrobiol., Epidemiol. i Immunobiol., No. 9, 1950, pp 30-35 in

Soviet

-W-24635 3 Dec 1952 p 7 (Microbiol. bibliography)

m

Also Mikrobiologiya, Vol 50, no 5, 1951

NOSKOV, A. I.

DZHILOVIAN, Kh., A., Sr. Sci. Co-worker and NOSKOV, A. I., Cand. Vet. Sci.  
All-Union Scientific Research Laboratory for the Study of Toxic Fungi,  
Ministry of Agriculture, USSR

"Therapy of acute forms of epizootic lymphangitis of horses."  
Sov. Veterinariya, 27 (7), 1950, p. 24

USSR/Medicine - Infectious Diseases  
(Veterinary)

Apr 51

"All-Union Conference on Equine Epizootic Lymphangitis," A. I. Noskov, M. S. Akulova  
No. 4

"Veterinariya" Vol. XXVIII, pp 58-60

Although the infection enters through traumatic skin injury, the disease is gen pathol process which involves the whole organism. Among measures recommended by the conf for liquidation of the disease no later than 1953 are gen therapy with acriflavine and blastomycin, production of antigen for opsonic-phagocytary reaction, study of application of Nile

181769

LC

USSR/Medicine - Infectious Diseases  
(Veterinary) (Contd)

Apr 51

blue and Dahlia violet for local therapy and of domestic acridine derivs for gen therapy, and clarification of possibility of transmission by insects.

181769

LC

Also U-4723, 30 Sept 1953

NOSKOV A. I.

Noskov, A. I.

Aug 53

USSR/Medicine, Veterinary - Epizootic Lymphangitis

"Allergenic Method of Diagnosis of Epizootic Lymphangitis in Horses," A. I. Noskov,  
Cand Vet Sci; V. P. Koroleva, Cand Biol Sci; All-Union Sci Res Lab (VNIIL) for the Study  
of Poisonous Fungi, Min of Agr and Supplies USSR

Veterinariya, Vol 30, No 8, pp 10-14

Histoplasmin has proven to be a specific allergen; it is effective, as well as harmless;  
in the diagnosis of epizootic lymphangitis of horses caused by the yeast like fungus  
*Histoplasma farciminosum* (*Cryptococcus farciminosus*). Histoplasmin has been recommended  
by the Main Admin of Animal Husbandry of the Min of Agr and Supplies of the USSR.  
Histoplasmin is now generally available to specialists in veterinary medical practice

265 T 33

GREZIN, F.V., kandidat veterinarnykh nauk.; NOSKOV, A.I., kandidat veterinarnykh nauk.

Use of antibiotics in gastrointestinal diseases in young pigs and dysentery in hogs. Dokl. Akad. sel'khoz. 21 no.9:3-6 '56.  
(MLRA 9:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy sanitarii i ektoparazitologii.  
(Swine--Diseases) (Antibiotics)

SOSNOV, P.O., direktor sovkhosa; KUDRYAVTSEV, P.F., starshiy veterinarnyy vrach; NOSKOV, A.I., kandidat veterinarnykh nauk.

Use of antibiotics. Veterinarifa 33 no.8:78-79 Ag '56. (MIRA 9:9)

1. Sovkhoz "Petrovskoye", Ukhtomskoye rayona, Moskovskoy oblasti.  
(Swine—Diseases and pests) (Antibiotics)

MUTOVIN, V.I., kand.vet.nauk; MOSKOV, A.I., kand.vet.nauk

Use of antibiotics. Veterinariia 35 no.5:100-104 W '58.  
(MIRA 12:1)

(Antibiotics)

MOSEKOV, A.I., kand. vet. nauk.

Use of a disinfection machine for treating the fleece of lambs in  
cases of trichophytia. Veterinaria 35 no.6:55-56 Je '58.  
(Ringworm) (Lambs—Diseases and pests) (MIRA 11:6)



NOSKOV, A.I.,referent; RYABOVA, G.S.,referent

Treating dermatomycosis in farm animals. Veterinariia 36  
no.1:55-57 Ja '59. (MIRA 12:1)  
(Veterinary medicine) (Dermatomycosis)

NOSKOV, Arseniy Ivanovich, kand. veter.nauk; RYADOVA, Galina  
Semenovna, kand.veter.nauk; SOKOLOVA, G.S., red.;  
SAYTANIDI, L.D., tekhn. red.

[Control of ringworm in farm animals] Bor'ba so strigu-  
shchim lishaem sel'skokhoziaistvennykh zhivotnykh. Moskva,  
Izd-vo M-va sel'.khoz.RSFSR, 1961. 58 p. (MIRA 15:7)  
(Cattle—Diseases and pests) (Ringworm)

NOSKOV, A. I. (Reviewer)

"Therapy and prophylaxis of ringworm infestation in agricultural animals."

Veterinariya, Vol. 38, No. 3, 1961, p. 47.

NOSKOV, A. I., (Candidate of Veterinary Sciences, All-Union Scientific Research Institute of Veterinary Sanitation).

"Testing of the fungicidal properties of benzene hexachloride and DDT.  
Veterinariya vol. 38., no. 11., November 1961., p. 72

NOSKOV, A.I., kand. veter. nauk; OCHKINA, I.I., kand. veter. nauk;  
VISHNIYAKOVA, N.M., uchenyy zootekhnik

Hygienic characteristics of silage. Veterinariia 41 no.1:95-97  
Ja '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii.

AKHMEDOV, A.M., prof.; DUSTOVA, R.T., aspirant; BELOV, Ye.M., kand.  
veterin. nauk; ANTONOVA, M.Ye., kand. veterin. nauk; MOSKOV, A.I.,  
kand. veterin. nauk; LIPINA, A.N., aspirant; SIMONOV, A.P., aspirant;  
BOCHAROV, D.A., kand. sel'skokhoz. nauk; KHRENOV, N.M., assistant

Sanitary and veterinary hygiene. Veterinariia 41 no.4:89-100  
Ap '64. (MIRA 17:8)

1. Samar'kandakiy sel'skokhozyaystvennyy institut (for Akhmedov, Dustova). 2. Nauchno-proizvodstvennaya laboratoriya po bor'be s boleznyami molodnyaka sel'skokhozyaystvennykh zhivotnykh Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh produktov RSFSR. (for Antonova). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy sanitarii (for Moskov). 4. Institut zhivotnovodstva Ministerstva sel'skogo khozyaystva Uzbekskoy SSR (for Lipina). 5. Vsesoyuznyy institut gal'mintologii imeni akademika K.I. Skryabina (for Simonov). 6. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti (for Bocharov). 7. Khersonskiy sel'skokhozyaystvennyy institut imeni A.D. Tsyurupy (for Khrenov).

NOSKOV, A.I.

Therapy and prophylaxis of ringworm in farm animals. Veterinaria  
38 no.3:47-55 Mr '61 (MIRA 18:1)

NOSKOV, A.I., kand. veterin. nauk

Testing the fungicidal effect of hexachloran and DDT. Veterina-  
riia 38 no.11:72 N '61 (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii.



NOSKOV, A.I., kand. veterin. nauk; SHARAPOV, V.M., mladshiy nauchnyy sotrudnik

Toxicity of mixed feeds infected with fungi. Veterinariia 41  
no.1:84-85 Ja '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii (for Noskov). 2. Biologicheskiy institut Sibirskogo  
otdeleniya AN SSSR (for Sharapov).

NOSKOV, A.I., kand.veterin.nauk; KOLESNIKOVA, Ye.A., veterinarnyy vrach

Measures for the control of ringworm. Veterinariia 41 no.3:35-37  
Mr '65. (MIRA 18:4)

NOSKOV, A.I., kand. veterin. nauk

Measures for controlling ringworm. Veterinariia 41 no.12:32-35 D  
'64. (MIRA 18:9)

ROGOVER, Grigoriy Borisovich. Prinimal uchastiye MOSKOV, A.M., astronom-  
geodexist. SMIRNOV, V.I., red.; FEDOROVA, L.M., red.izd-va;  
BYKOVA, V.V., tekhn.red.

[Characteristics of the Moril'sk deposit 1, having possible  
prospecting significance and the efficient method of prospecting  
it] Nestorozhdenie Moril'sk I, nekotorye ego osobennosti, mo-  
gushchie imet' poiskovoe znachenie, i ratsional'naya metodika ego  
razvedki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geologii i  
okhrane nedr, 1959. 167 p. (MIRA 13:5)

(Moril'sk region--Ore deposits)

18 1111

2308.2808.1413

S/126/60/010/006/017/022  
E111/E452

AUTHORS: Guterman, S.G., Gol'dshteyn, M.I. and ~~Noskov, A.M.~~  
TITLE: Dispersion Hardening and Fine Crystal Structure of  
Carbon Steel With Small Additions of Vanadium  
PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.6,  
pp.903-906

TEXT: The object of the present work was to study the influence of small (0.01 to 0.093%) vanadium additions on the hardening of carbon steel and elucidate the causes of such hardening. Published investigations on this subject (Ref.2 to 4) deal with relatively high vanadium contents. Induction melted type 40 steel was used. 0.04% Aluminium was added in the furnace to deoxidize the metal: vanadium additions were made in the ladle or furnace. Ingots were forged into 14 x 14 mm bars which were normalized from 840°C. Fig.1 shows hardness as a function of tempering temperature (400 to 650°C for 1 hour) for hardened specimens with various vanadium contents: vanadium has no effect at 400°C but at higher temperatures it increases hardness. The influence is decreased if hardening temperature is reduced from 950 to 840°C. X

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S/126/60/010/006/017/022  
E111/E452

# Dispersion Hardening and Fine Crystal Structure of Carbon Steel With Small Additions of Vanadium

As shown in Fig.2, the presence of 0.01% of vanadium increases the strength characteristics of hardened and tempered (600°C) specimens, further increases in vanadium having little effect; however, vanadium reduces plasticity somewhat. Chemical analysis of electrolytically produced carbide residues and mosaic block size determinations were carried out. For the latter, a type YPC-50M (URS-50I) X-ray ionization installation was used. Fig.3 shows, as functions of total vanadium content, the vanadium content in the carbide residues (as % of dissolved metal) and the hardness and block size for specimens hardened from 950°C and tempered at 600°C. This shows that the hardening with small vanadium additions is due to precipitation of vanadium carbides and reduction in block size. This was confirmed by results (Fig.4) for specimens of a heat with up to 1.7% V hardened from a temperature giving complete solution of carbides and tempered at 600°C. [Abstractor's note: The abscissa of Fig.2 and 4 incorrectly designated as "W".] There are 4 figures, 2 tables

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S/126/60/010/006/017/022  
E111/E452

Dispersion Hardening and Fine Crystal Structure of Carbon Steel  
With Small Additions of Vanadium

and 6 references: 4 Soviet and 2 non-Soviet.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut  
chernykh metallov (Ural Scientific Research  
Institute for Ferrous Metals)

SUBMITTED: May 20, 1960

Card 3/3

NOSEKOV, A.M.

Determination of flaws in small spheres. Zav.lab. 26 no.5:624-  
625 '60. (MIRA 13:7)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh  
metallov.  
(Metals--Testing) (X rays--Equipment and supplies)



NOSKOV, A.S.

137-58-5-9096

Translation from: Referativnyi zhurnal, Metallurgiya, 1958, Nr 5, p 50 (USSR)

AUTHOR: Noskov, A.S.

TITLE: On a Project for a Compound Installation for the Recovery of Heat from Cooling Processes and From Waste Gases of an Open-hearth Furnace (O projekte kompleksnoy ustanovki po ispol'zovaniyu tepla okhlazhdeniya i tepla ukhodyashchikh gazov martenovskoy pechi)

PERIODICAL: Tr. Nauchno-tekhn. soveshchaniya po ispol'zovaniyu vtorichnykh energ. resursov. Moscow-Leningrad, Gosenergoizdat 1957, pp 101-110

ABSTRACT: The author describes the engineering project of a compound system for recovery of heat from cooling processes and from waste gases of an open-hearth furnace; the project includes provisions for generation of steam at an absolute pressure of 17 atm and a superheating temperature of 320°C. This is accomplished by means of combining equipment for evaporation cooling with heat recovery boilers and by employing the principle of forced circulation for this combination system. Caissons, internally lined, are of tubular design with welded collectors and

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137-58-5-9096

On a Project for a Compound (cont. )

with series-connected tubing. The pivot girders are made of steel and are drilled, as are the frames which are welded together from separate components. The cost of one ton of steam is expected to be 6.24-8.19 rubles; the initial construction expenses should be recovered within 1.26 years.

Ye.N.

1. Open hearth furnaces--Operation
2. Waste gases--Applications

Card 2/2

*MOSKOV, A.S.*

TUROVTSEVA, Z.M.; LITVINOVA, N.F.; MIKHAYLOVA, G.V.; MOSKOV, A.S.; KHALITOV, R.Sh.

Apparatus for determining the content of gases in metals [with summary in English]. Zhur.anal.khim. 12 no.2:208-213 Kr-Ap '57. (MLRA 10:7)

1. Institut geokhimi i analiticheskoy khimii im. V.I. Vernadskogo  
akademii nauk SSSR, Moskva.  
(Chemical apparatus) (Gases in metals)

NOSKOV, A. S.

Noskov, A. S.

"'Ryadushka' of the 'Khibinsk reservoir.'" Moscow Technical Inst of the  
Fish Industry and Economy imeni A. I. Mikoyan. Moscow, 1956 (Disserta-  
tion for the degree of Candidate in Biological Science)

Knizhnaya letopis'  
No. 25, 1956. Moscow

NOSKOV, A.S.

Results of tagging bream and pike perch in the Courland Lagoon.  
Trudy BaltNIRO no.7:141-146 '61. (MIRA 15:2)  
(Courland Lagoon--Bream) (Courland Lagoon--Perch) (Fish tagging)

TUROVTSEVA, Z.M. [deceased]; MALYSHEV, V.I.; NOSKOV, A.S.

Determination of nitrogen and oxygen in  $UF_6$ . Zhur. anal. khim.  
20 no.12:1353-1358 '65. (MIRA 18:12)

1. Submitted April 21, 1964.

NOSKOV, B., kand. tekhn. nauk

A new system of planning wharves for the handling of general cargo.  
Mor. flot 25 no.7, 35-36 J1 '65, (MIRA 18:7)

NOSKOV, B.A.; VASHCHENKO, K.I., professor, doktor tekhnicheskikh nauk.  
redaktor; RUDENSKIY, Ya.V., tekhnicheskiiy redaktor

[Manufacture of cast drop-forging dies] Proizvodstvo litykh  
molotovyykh shtampov. Kiev, Gos. nauchno-tekhn. ind-vo mashino-  
stroit. lit-ry, 1953. 97 p. [Microfilm] (MLBA 7:10)  
(Steel castings)  
(Dies (Metalworking))



SUKHODOL'SKAYA, Ye.A., kandidat tekhnicheskikh nauk; UL'YANOV, V.A.,  
kandidat tekhnicheskikh nauk, retsenzent; MOSKOV, B.A., kandidat  
tekhnicheskikh nauk, redaktor; RUDENSKIY, Ya., redaktor

[Materials for piston rings] Materialy porahmevykh kolets. Kiev,  
Gos. nauchno-tekhn. izd-vo mashinostroit. i sudestroit. lit-ry.  
1953. 127 p. (MIRA 7:8)  
(Piston rings) (Cast iron)

NOSKOV, B. A., jt. au.

The technology of casted parts. Izd. 2., perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 278,2 p. (55-32811)

TS230.K63 1954

NOVIK, A.A., kandidat tekhnicheskikh nauk; NOSKOV, B.A., kandidat tekhnicheskikh nauk, nauchnyy redaktor; DONSKOV, Ya.Ye., redaktor; SHUBIN, Ye.V., tekhnicheskiy redaktor

[The central factory laboratory] Tsentral'naya zavodskaya laboratoriya. [Khar'kov] Khar'kovskoe obl. izd-vo, 1956. 82 p. (MIRA 10:1)

1. Zamestitel' nachal'nika tsentral'noy zavodskoy laboratorii Khar'kovskogo zavoda transportnogo mashinostroyeniya. (for Novik)  
(Engineering laboratories)

NOSKOV, BORIS ALEKSEYEVICH

PHASE I BOOK EXPLOITATION

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Noskov, Boris Alekseyevich, and Smelyakov, Nikolay Nikolayevich

Konstruirovaniye litykh detaley (Design of Cast Parts) Kiyev, Mashgiz, 1957. 210 p. (Biblioteka konstruktora) 8,600 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskaya oblastnaya organizatsiya.

Reviewer: Ryzhikov, A. A., Doctor of Technical Sciences, Professor;  
Ed.: Soroka, M. S.; Tech. Ed.: Rudenskiy, Ya. V.

PURPOSE: This book is designed as a manual for engineers, designers and technicians engaged in machine building. It may also be used by foundry engineers.

COVERAGE: The authors stress the importance of castings in machine design. In this book they describe the elements of design of ferrous and nonferrous castings. A few chapters are devoted to various methods of casting such as investment precision casting, pressure casting, centrifugal casting,

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Design of Cast Parts

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the use of permanent and shell molds, and the application of welding to cast iron elements.

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399

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AVAILABLE: Library of Congress

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GO/vm  
6-11-58

NOSKOV, B. A.

137-58-3-5445

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 136 (USSR)

AUTHOR: Noskov, B. A.

TITLE: Fabrication by Means of Welded Castings (Svarnolityye detali)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1957, Vol 11, pp 25-37

ABSTRACT: Technological, production-cost, and organizational problems connected with the substitution of castings by welded castings were examined on the following examples: a) a gas compressor housing weighing approximately 45 tons; b) a turbine runner 4165 mm in diameter consisting of two cast disks and blades of rolled metal; c) the front support for the boiler of a locomotive; d) guiding trough of a stripping crane; e) the tripod for the reeling unit of a wire drawing mill; f) a King-bolt support for a railway car; g) a steam superheater box. The author lists a number of cast components which, at the present time, can not be replaced by welded castings.  
Bibliography: 10 references.

V.S.

Card 1/1



NOSKOV, B. A.

AUTHOR: Ginzburg, Z.L., Engineer, 128-58-4-15/18

TITLE: Scientific-Technical Session on Progressive Technology of Casting Molds (Nauchno-tekhnicheskaya sessiya po progressivnoy tekhnologii liteynoy formy)

PERIODICAL: Liteynoye Proizvodstvo, 1958, No. 4, pp 28-30 (USSR)

ABSTRACT: A conference on the technology of casting molds - organized by the NTOMASHPROM of the Khar'kov Oblast' - convened in Khar'kov on 14-16 November 1957. More than 200 delegates from plants, research institutes, vuzes and other organizations of the Khar'kov and other regions participated. Problems of earth-mold casting were discussed. A total of 24 reports were delivered on hardening and exothermic mixes and the mechanized processes in USSR and abroad. B.A. Noskov and V.I. Ryzhkov (KhPI) gave information on molding sand and clay available in the Khar'kov economic region. The following reports were also heard: V.V. Ryabova - on the use of carbon dioxide, at NKMZ, for chemical strengthening of molds, which has reduced the drying period and cut the consumption of generator gas, improved the quality of castings, and nearly

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doubled the production of molds; N.Kh. Ivanov - on the use of the same quick-hardening mixes, with cold carbon dioxide, at the Slavyanskiy mashinostroitel'nyy zavod (Slavyansk Machinebuilding Plant); Engineer D.A. Lur'ye (Giprostanok) - on modern methods and an installation for production of carbon dioxide; Engineer Ye.P. Tolmachev of the Voroshilovgradskiy teplovozoostroitel'nyy zavod (Voroshilovgrad Diesel-Locomotive Plant) - on experience with molding sand milled in a special vibration mill, which solves the problem of obtaining castings with a clean surface not only with shell molds, but also with conventional molding methods; A.Ya. Izmalkov - on the oil-less binder "P" used at the plant "Serp i Molot"; A.I. Veynik - on the theory of forced cooling of castings and the experience in this method at the Novo-Kramatorskiy i Minskiy stankostroitel'nyy zavodov (Novo-Kramatorsk and Minsk Machine Tool Plants) which developed this method in the production of large castings; I.V. Ryzhov - on the physico-chemical nature of sand crust (on castings) and the ways of eliminating this crust by producing a de-oxidizing atmosphere between the mold and the metal, casting in vacuum, or crystallization-preventive additions to water glass; P.G. Novikov (of TsNIITMASH) - on

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results of the collective work of TsNIITMASH and NKMZ on technological problems of the production of large molds, and the new method of forced or controlled cooling of castings in the ground, as well as on the experiments with a system of universally applicable cast parts; B.K. Dymshin of the Khar'kovskiy turbinnyy zavod (Khar'kov Turbine Plant) and Engineer I.Ye. Gabey (NKMZ) - on exothermic mixes for heating the feeding heads of steel and cast iron castings; M.L. Turovskiy - on investigation of internal stresses at the Khar'kovskiy zavod transportnogo mashinostroyeniya (Khar'kov Plant of Transport Machines); V.S. Ladnov - on mechanized casting into shell molds by shot-strewing the mold boxes, being introduced at the same transport machine plant; K.I. Kostinenko - on the organization of boxless molding at the plant Rostsel'mash; N.A. Gerasimov of the Kremenchugskiy zavod dorozhnykh mashin (Kremenchug Road Machine Plant) - on casting parts in molds produced under pressure up to 100 kg/cm<sup>2</sup>, without mold boxes, which nearly completely eliminates the necessity of machining the castings and greatly reduces the consumption of foundry materials and metal; A.M. Petrichenko of the Khar'kovskiy

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avtodorozhnyy institut (Khar'kov Auto-Road Institute) - on the experience of the Chinese Democratic Republic with semi-permanent molds for thin-wall castings; Ye.A. Sukhodol'skaya of the Khar'kovskiy politekhnicheskii institut (Khar'kov Polytechnical Institute) - on some peculiarities of foundry technology in China; V.D. Bezuglov of the Khar'kovskiy zavod zubovrachebnykh materialov (Khar'kov Plant of Dentistry Materials) - on self-hardening plastics "AST" which is readily machineable, well suited for decorative correction of surface faults on metal castings, and also for making light core boxes, press-molds for wax patterns, etc. The conference recommended that the Khar'kov Sovnarkhoz organize the exploitation of molding sands and clays in the region and a centralized production of carbon dioxide. The conference pointed out the necessity of extensive use of quick-drying mold mixes, forced cooling of castings, exothermic mixes for heating the feeding heads, and the necessity to introduce the shell-mold and the chill-casting methods. The method of making molds

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Scientific-Technical Session on Progressive Technology of Casting Molds

under high pressure was recommended for use. The importance of the Khar'kov Dentistry Materials Plant and KhTZ work with self-hardening plastics for foundry use was emphasized.

AVAILABLE: Library of Congress  
1. Castings-Scientific reports

Card 5/5

DEKATV, I.N.; NOBMOV, P.A.; LADKH, V.F.; TOLKOVAN, G.I.

Gas furnace for secondary melting of cast iron. Mashinostroenie  
no.3:44-46 18-7e '64. (MIRA 17:11)

SOV/128-58-11-8/24

AUTHORS: Noskov, B.A., Rozenberg, Yu.G., Tsukerman, S.I., Den'gin, I.N.  
TITLE: A Coke-Gas Cupola Furnace (Koksogazovaya vagranka)  
PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 11, pp 14-15 (USSR)  
ABSTRACT: The use of natural gas in cupola smelting leads to reduced coke expenses. Experiments carried out at the Khar'kovskiy elektromekhanicheskiy zavod (Khar'kov Electromechanical Plant) proved that the successful use of gas and coke depends on proper gas burning conditions, i.e. on the design of burners and their position in the cupola. It was stated that good results can be obtained by placing the burners above the tuyeres. Further investigations will be concentrated on determining the optimum dimensions of the distance between the burner axes and the tuyeres. The information includes a description of a cupola where normal conditions for gas burning and reduced coke expenses were obtained by reducing the number of tuyeres from 6 to 4. A new improved

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A Coke-Gas Cupola Furnace

SOV/128-58-11-8-24

cupola design, now being installed, will make possible a further reduction in coke expense by a change in air distribution. There are 3 diagrams and 1 photo.

1. Blast furnaces--Equipment
2. Blast furnaces--Operation
3. Natural gas--Performance

Card 2/2



RYZHKOV, I.V.; NOSKOV, B.A.

Nature of sand burning and measures for its prevention. Trudy  
KhPI 21 Ser.mat. no.4:37-49 '59. (MIRA 14:7)  
(Founding)

Leningrad. Politechnicheskii Institut

Исследования в области литературы и искусства: труды  
Академии наук СССР. Серия: Исследования в области  
литературы и искусства. Т. 1. М., 1960. 336 с.  
4,000 экз. Изд. 1-е.

Assoc. Ed.: Yu. A. Melchior, Doctor of Technical Sciences,  
Professor, Ed.: M. G. Gikherich, Doctor of Technical  
Sciences, Professor, and E. F. Labzov, Doctor, Managing  
Ed. for Literature on Heavy Machines Building (Engineering  
Department, Machine) I. A. Kuznetsov, Associate Prof.  
Is. A. Dalgakovskaya, and L. F. Shchegoleva.

PURPOSE: This book is intended for the technical personnel of countries. It may be used by students of the field.

**DISCUSSION:** This collection of articles discusses problems in foundry processes. Individual articles treat the melting of metals and their alloys, mechanization and automation of casting processes, aspects of the manufacture of steel, cast iron, and nonferrous metal castings. No personalities are mentioned. References concern individual articles.

### Recent Achievements in Founding (Conts.)

- |     |  |          |
|-----|--|----------|
| 25. | Dynamic, L. V., Experimental Investigation of the<br>Mold Raming Process   | 207/3139 |
| 26. | Recher, B. A., Materials for Shell Molds   | 1971     |
| 27. | Shannon, L. D., Ceramic Cores for Investment Casting<br>of Corrosion-Resistant Alloy Hollow Products of Complex<br>Configuration | 2021     |
| 28. | Slusarky, M. I., Temperature Regime in Production of<br>Shell Molds and Their Strength   | 2023     |
|     | Y. STEEL CASTINGS  | 212      |
| 29. | McGrath, A. M., Mechanism of the Formation of Out-<br>of-Center Ligation in a Steel Ingot  | 219      |
| 30. | Shuler, S. M., Basic Patterns of Crystallization of<br>High-Alloy Corrosion-Resistant Steels With a Lower<br>Content of Nickel   | 222      |
- and 6/3

Card 6/9

maskov B.A.

TYUTYUNNIKOV, B.N., prof., doktor tekhn.nauk; NOSKOV, B.A., dotsent, kand.  
tekhn.nauk; RYZHAKOV, I.V., kand.tekhn.nauk; PEPENKO, V.D., assistant;  
BOGDAN, I.V., inzh.

Liquid water glass mixtures. Izv.vys.ucheb.zav.; mashinostr. no.4:  
60-63 '60. (MIRA 14:4)

1. Khar'kovskiy politekhnicheskii institut.  
(Soluble glass)

NOSKOV, B.A., kand.tekhn.nauk; MAKARENKO, S.F., inzh.; SUMTSOV, V.F.,  
inzh.; STOYANCHENKO, S.I., inzh.

Blowing gases through liquid metals. Mashinostroenie no.6:  
39-43 N-D '62. (MIRA 16:2)

1. Khar'kovskiy politekhnicheskii institut (for Noskov).
2. Luganskiy vecherniy mashinostroitel'nyy institut (for Makarenko, Sumtsov).
3. Luganskiy zavod im. Parkhomenko (for Stoyanchenko).

(Metallurgy)

NOSKOV, B.A.; KASHIRSKIY, A.V.

Hydrogen saturation and the fluidity of cast iron. Lit. proizv.  
no. 11:32-33 N '62. (MIRA 15:12)  
(Cast iron—Hydrogen content)

DEN'GIN, I.N.; KASHIRSKIY, A.V.; NOSKOV, B.A.

Relation between hydrogen content in the furnace-top gas of a  
coke-and-gas cupola and in the pig iron being melted. Izv. vys.  
ucheb. zav.; chern. met. 6 no.6:163-171 '63. (MIRA 16:8)

1. Khar'kovskiy politekhnicheskii institut.  
(Cast iron--Hydrogen content) (Gases--Analysis)

NOSKOV, B.A., kand.tekhn.nauk; MAKARENKO, S.F., inzh.; SHUT'YEV, Yu.S.,  
inzh.

Effect of the nitrogen blast on the structure and properties of  
cast iron. Mashinostroenie no.4:40-43 J1-Ag '63. (MIRA 17:2)

1. Khar'kovskiy politekhnicheskii institut (for Noskov). 2. Lu-  
ganskii vechernii mashinostroitel'nyy institut (for Makarenko,  
Shut'yev).

NOSKOV, Boris Alekseyevich, kand. tekhn. nauk; DEN'GIN, Igor'  
Nikolayevich, kand. tekhn. nauk; TARASENKO, V.S., inzh.,  
retsensent

[Using natural gas for the melting of cast iron] Primenenie  
prirodnogo gaza pri vtorichnoi plavke chuguna. Kiev,  
Tekhnika, 1964. 114 p. (MIRA 17:8)



BOBKO, Yuriy Georgiyevich, NQSKOV, B.A., prof., retsenzent;  
LYUBCHENKO, A.P., kand. tekhn. nauk, retsenzent;  
SAKHAROVA, A.V., dots., otv. red.; KOVALEVA, Z.G., red.

[Aluminum cast iron] Aluminievye chuguny. Khar'kov,  
Izd-vo Khar'kovskogo univ., 1964. 194 p. (MIRA 17:6)

NOSKOV, B.A.; TSUKERMAN, S.I.

Metallurgical characteristics of remelting cast iron scrap.  
Lit. proizv. no.2:3-5 F '65. (MIRA 18:6)

NOSHOW, B.A., Doctor Techn. nauk

Scientific and technical conference on the use of natural gas for  
the melting of pig iron. *Izv. vuzov. No. 7:4/43* (1968).  
(NORA 2334)

NOSKOV, B.A., doktor tekhn. nauk

Gas-fired iron-melting furnace. Lit. proizv. no.1:13-14 Ja '66.  
(MIRA 19:1)

ARTHIPOV, P.P., inzhener; IVANOV, Ye.D., inzhener; KRYLOV, N.V., inzhener-  
arkhitektor; MIKANDROV, B.I., inzhener-arkhitektor; MOSKOF, B.G.,  
inzhener-arkhitektor; RYABTSEV, M.E., vetvrach; SOKEBANICHEV, F.S.,  
inzhener-arkhitektor; TSIBUL'SKIY, L.A., kandidat sel'skokhozyaystven-  
nykh nauk; PIOTROVSKIY, M.I., inzhener, retsentsent; VOL'FOVSKAYA, V.N.,  
redaktor; FEDOTOVA, A.F., tekhnicheskiiy redaktor.

[Handbook on the construction of farm buildings] Spravochnik po sel'sko-  
khoziaistvennomu stroitel'stvu. Moskva, Gos. izd-vo selkhoz. lit-ry.  
Vol. 2. 1952. 579 p. (MLRA 8:2)  
(Farm buildings) (Building)

ARKHANGEL'SKIY, P.Ye., inzhener; ARKHIPOV, P.P., inzhener; VAS'KOV, M.P.,  
agronom; ZHIGUDSKIY, D.A., arkhitekter; IVANOV, A.P., arkhitekter; KIBI-  
REV, S.F., arkhitekter; KRYLOV, N.V., inzhener-arkhitekter; KULAKOV,  
D.V., arkhitekter; MARTYNOV, P.F., inzhener; NIKIFOROV, V.S., inzhener;  
~~MOSKOV, B.G., arkhitekter; PETUKHOV, B.V., kandidat tekhnicheskikh nauk;~~  
RUDANOV, M.L., kandidat tekhnicheskikh nauk; RYAZANOV, V.S., kandidat  
arkhitektury; SOKHRANICHEV, N.S., inzhener-arkhitekter; TARASOV, D.I.,  
arkhitekter; SHMIDT, N.E., kandidat arkhitektury; KHOMUTOV, Ye.Ye.,  
arkhitekter; VOL'FOVSKAYA, V.N., redaktor; FEDOTOVA, A. F., tekhniche-  
skiy redaktor.

[Handbook on the construction of farm buildings] Spravochnik po sel'sko-  
khoz. stroitel'stvu. Avtorskii kollektiv: P.E. Arkhangel'skii  
i dr., avtor-sost. N.V. Krylov. Moskva, Gos. izd-vo sel'khoz. lit-ry. Vol. 3  
1955. 843 p. (Farm buildings) (MIRA 9:6)

NATSENTOV, D.I., kandidat sel'skokhozyaystvennykh nauk; MKRTCH'YAN, V.S.,  
kandidat sel'skokhozyaystvennykh nauk; ARKHANGEL'SKIY, P.Ye.,  
inzhener; MOSKOV, B.G., arkhitekt; KRASNOSHCHENKOV, N., redaktor;  
LIL'YE, A., tekhnicheskii redaktor

[Greenhouses, hotbeds and heated soil] Tsplitsy, parniki, uteplennyi  
grunt. [Moskva] Moskovskii rabochii, 1956. 246 p. (MIRA 9:9)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva (for  
Natsentov, Mkrtch'yan)
  2. Respublikanskiy gosudarstvennyy institut  
proyektirovaniya sovkhovnykh predpriyatiy - Rosgiprosokhhozstroi  
(for Arkhangel'skiy).
  3. Vsesoyuznyy gosudarstvennyy institut  
proyektirovaniya sel'skokhozyaystvennykh predpriyatiy - Soyuzgipro-  
sel'khoz (for Moskov)
- (Hotbeds) (Soil heating) (Greenhouses)

*1905 Nov, 1965*  
 BREMER, G.I., doktor tekhn.nauk, prof.; GALDIN, M.V., inzh.; DEMIN, A.V.,  
 kand.tekhn.nauk; ZYABLOV, V.A., kand.tekhn.nauk; KAPLUNOV, M.M.,  
 inzh.; KASHENKOV, L.Ya., inzh.; KOROLEV, V.F., kand.tekhn.nauk;  
 KRASHOV, V.S.; KULIK, M.Ye., kand.tekhn.nauk; MAKAROV, A.P., inzh.;  
 NOVIKOV, G.I., kand.tekhn.nauk; NOSKOV, B.G., inzh.; OLENEV, V.A.,  
 kand.vet.nauk; OSTANKOV, V.P., inzh.; PERCHIKHIN, A.V., inzh.;  
 POKHVALENSKIY, V.P., kand.tekhn.nauk; SERAFIMOVICH, L.P., kand.  
 tekhn.nauk; SMIRNOV, V.I., kand.tekhn.nauk; URVACHEV, P.N., kand.  
 tekhn.nauk; FADEYEV, M.N., inzh.; FATEYEV, Ye.M.; KRYUKOV, V.L.,  
 red.; VESKOVA, Ye.I., tekhn.red.

[Reference book on the mechanization of stock farming] Spravochnaia  
 kniga po mekhanizatsii zhivotnovodstva. Moskva, Gos.izd-vo sel'khoz.  
 lit-ry, 1957. 678 p. (MIRA 10:12)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh  
 nauk im. V.I.Lenina (for Krasnov, Fateyev).  
 (Farm equipment) (Stock and stockbreeding)



MOVSISTANTS, A.P. Prinimali uchastiye: BEGUCHEV, A.P.; IVANOV, A.D.;  
KARNAUKHOVA, Ye.I.; NIKOLAYEVSKAYA, O.N.; NOSKOV, B.G.; PUTILOV,  
A.K.; AVARSKIY, A.I., red.; PEVZNER, V.I., tekhn.red.; TEUKHINA,  
O.N., tekhn.red.

[Brief manual on cattle raising] Kratkii spravochnik po krupnomu  
rogatomu skotu. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 327 p.  
(MIRA 13:12)

(Cattle)

*Noskov, B. M.*

USSR/Physics - Technical physics

Card 1/1 Pub. 22 - 16/40

Authors : Gruzin, P. L.; Noskov, B. M.; and Shirokov, V. I.

Title : Effect of Mn on the self-diffusion of Fe

Periodical : Dok. AN SSSR 99/2, 247-250, Nov 11, 1954

Abstract : Eight Fe-Mn alloys were investigated to determine the effect of Mn on the self-diffusion of the Fe in austenite. The thermal dependence of the self-diffusion coefficients of Fe in the gamma-phase of Fe-Mn alloys was investigated by the method of radioactive indicators through the utilization of the artificially-radioactive Fe<sup>59</sup> isotope. The self-diffusion coefficients were calculated on the basis of data obtained by measuring the integral radioactivity of the sample. It was found that the bond between the atoms of the basic alloy during the addition of the second element increases. The energy of activation of Fe self-diffusion at an Mn content of 8% was established as greater than the activation energy of pure iron self-diffusion. Seven references; 6-USSR and 1-USA (1938-1954). Tables; graphs.

Institution : Central Scientific Research Institute of Ferrous Metals, Institute of Metallurgy and Physics and State University, Institute of Chemistry, Gorkiy

Presented by: Academician G. V. Kudryumov, June 5, 1954

*NOSKOV, B.M.*

GRUZIN, P.L., kand.fiz.-mat.nauk; NOSKOV, B.M., kand.fiz.-mat.nauk; SHIROKOV,  
V.I., kand.fiz.-mat.nauk.

Effect of manganese on the self-diffusion of iron. Probl. metalloved.  
1 fiz. met. no.4:503-508 '55. (MIRA 11:4)  
(Diffusion) (Iron) (Manganese)

NOSEKOV, B. M.

Category : USSR/Solid State Physics - Diffusion. Sintering E-6

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6681

Author : Noskov, B.M., Kuznetsov, Ye.V., Shcherbedinskiy, G.V.

Inst : Gor'kiy, USSR

Title : Influence of Intragranular Separation Boundaries on the Coefficient of Self-Diffusion of Iron in Iron-Nickel-Carbon Alloys.

Orig Pub : Fiz. metallov, i metallovedeniye, 1956, 2, No 3, 489-493

Abstract : The coefficient of self-diffusion of iron is 2-3 times greater in alloy specimens that have been subjected to martensitic transformation and have been again restored to austenite, than in specimens that have not been subjected to martensitic transformation. This is caused by the presence of traces of previous martensite boundaries, along which intercrystalline diffusion is more rapid. These traces are eliminated gradually as the temperature increases during the time of heating. The energy of activation of the process of eliminating the traces is nearly equal to the activation energy of the intercrystalline self-diffusion.

Card : 1/1

NOSKOV, B.M.

Some results of studying self diffusion of iron and problems of heat  
resistance. Issk. po sharopr. splav. 3:91-96 ' 58. (MIRA 11:11)  
(Heat-resistant alloys) (Crystal lattices) (Diffusion)

NOSKOV, B.M.; PAVLOV, P.V.; SHCHERBEDINSKIY, G.V.

Diffusion of tin in  $\alpha$  and  $\beta$ -phases of the system copper - tin.  
Izv. vys. ucheb. zav.; fiz. no. 4:163-167 '59. (MIRA 13:3)

1. Fiziko-tekhnicheskiy institut Gor'kovskogo gosuniversiteta imeni  
N.I. Lobachevskogo.

(Copper-tin alloys)

67761

18.7500

SOV/126-8-5-14/29

AUTHORS: Zelinskiy, M.S., Noskov, B.M., Pavlov, P.V., and  
Shitova, E.V.

TITLE: Influence of Vanadium Additions on the Self-Diffusion  
of Iron

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 5,  
pp 725-730 (USSR)

ABSTRACT: In contrast to the effect of many other transition elements, vanadium has been found to give a weaker atomic bonding than occurs in pure iron (Refs 6, 7). Since for other metals results of diffusion and X-ray investigations agree, the authors decided to study the self-diffusion of iron with respect to vanadium content. Although this had already been studied, work by Sanadze and Tsivtsivadze (Ref 8) has thrown doubt on some previous results (Refs 4, 5, 9). The present authors used three Fe-V (0.48, 1.01 and 2.04% V) and two Fe-V-C (0.096, 2.46% V and 0.820, 0.25% C, respectively) alloys (compositions shown in Table 1). 5 x 8 x 25 mm plane parallel specimens were subjected to homogenizing annealing at 1100 °C for 20 hours. A thickness of about 0.005 mm of radioactive Fe<sup>59</sup> was electrodeposited on one face. Pairs of specimens with ✓

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67761

30V/126-8-5-14/29

Influence of Vanadium Additions on the Self-Diffusion of Iron

their active faces in contact were subjected to isothermal diffusion annealing for 4-200 hours in a quartz tube evacuated to  $10^{-3}$  mm Hg. Temperature (900-1300 and 1100-1340 for the Fe-V and Fe-V-C alloys, respectively) was controlled to  $\pm 5$  °C. After annealing specimens were rapidly quenched and the self-diffusion coefficients determined by removing layers and measuring the integral residual gamma-activity of the remainder of the specimen (Ref 10), with precautions to avoid end effects. Two to four independent determinations were made at each temperature. From the break at 1100 °C on the curve of log D vs inverse of absolute temperature it was deduced that below this temperature inter-crystallite diffusion plays a big part. Results above 1100 °C referred to uniform diffusion and were used in calculating the coefficients: these and other diffusion parameters are shown in Table 2. In Table 3 the corresponding data for inter-crystallite diffusion calculated by Fisher's formula (Ref 11) are given for the Fe-V alloys. The linear relation between the logarithm of the uniform diffusion coefficient and

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67761

SOV/126-8-5-14/29

Influence of Vanadium Additions on the Self-Diffusion of Iron

the activation energy for these alloys is shown in Fig 2; in Fig 3 the activation energy is shown as a function of the vanadium concentration, showing that the activation energy decreases linearly with increasing vanadium concentration. The authors discuss this and other properties of vanadium in relation to those of similar metals. There are 3 figures, 3 tables and 15 references, of which 13 are Soviet, 1 is English and 1 is French.

ASSOCIATION: Issledovatel'skiy fiziko-tekhnicheskiy institut  
g. Gor'kiy

Card 3/3 (Physico-Technical Research Institute, Gor'kiy) ✓

SUBMITTED: May 29, 1959

ACCESSION NR: AR4022439

S/0058/64/000/001/A037/A037

SOURCE: RZh. Fizika, Abs. 1A339

AUTHOR: Kanter, B. Z.; Lermontov, V. V.; Noskov, D. A.; Yushkov, Yu. G.

TITLE: 5-MeV microtron

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 122, 1962, 45-49

TOPIC TAGS: microtron, microtron characteristics, microtron electromagnet, particle accelerator, accelerator, electron injection

TRANSLATION: The 5-MeV microtron of the Tomsk Polytechnic Institute is described (RZhFiz, 1963, 1A401--403). The high frequency section of the amplifier includes a magnetron oscillator, two phase shifters, an absorbing load, and a toroidal cavity with Q of approximately 2000. The electromagnet poles had a diameter of 55 cm and the mag-

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ACCESSION NR: AR4022439

netic core had a cross section 30 x 12 cm. All the main units of the accelerator were constructed in 1959. During the starting, problems involved in the optimal coupling between the resonator and the waveguide were investigated, along with the possibility of using an incandescent cathode for electron injection. The current attained to date on the ninth orbit (5 MeV energy) is several microamperes per pulse. K. Belovintsev.

DATE ACQ: 03Mar64

SUB CODE: PH, SD

ENCL: 00

Card 2/2

L 18474-66	ENT(m)/EMP(v)/T/EMP(t)/EMP(k)	JD/HM
ACC NR: AR6009960	SOURCE CODE: UR/0137/65/000/012/E036/E036	
AUTHOR: <u>Kaz'min, G. S.; Nogkov, D. A.; Pankovets, N. G.; Proskurovskiy, D. I.;</u> <u>Sudakov, V. I.; Shangin, A.S.</u>		
ORG: none	44.55	45 B
TITLE: <u>Electron-beam welding</u> of materials in a vacuum		
SOURCE: Ref. zh. Metallurgiya, Abs. 12E283		
REF SOURCE: Sb. dokl. k Novosib. nauchno-tekhn. konferentsii po mashinostr. Ch. 1. Novosibirsk, 1964, 115-122		
TOPIC TAGS: electron beam welding, vacuum welding, metal cutting		
TRANSLATION: The authors describe the advantages of the electron-beam method for welding metal over other methods. Units are described for welding, drilling and cutting metals with the use of an electron beam. These installations were developed in the Department of Electronic Devices at the Tomsk Institute of Radioelectronics and Electronic Technology. V. Fomenko [JPRS]		
SUB CODE: 13		
Card 1/1	UDC: 621.797.72	

ACC NR: AR7002223

SOURCE CODE: UR/0275/66/000/010/V002/V002

AUTHOR: Noskov, D. A.; Proskurovskiy, D. I.

TITLE: Using alternating voltage to feed an electron welding gun

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10V10

REF SOURCE: Tr. Tomskogo in-ta radioelektron. i elektron. tekhn. no. 4, 1965, 102-103

TOPIC TAGS: welding equipment, electron gun, welding electrode, ~~welding gun~~  
*electron beam welding, alternating voltage*

ABSTRACT: Experimental electron-beam welding equipment is described in which the electron gun is fed with alternating voltage. The unit uses the rectifier properties of the electron gun, which functions as a rectifier with high internal resistance. The parts intended for welding are heated only during the negative half-cycles. The anode of the electron gun is grounded, while the cathode is fed alternating voltage by a step-up transformer winding. In this connection, the use of a magnetic focusing beam is impaired and electrostatic focusing may be used. However, it requires a proportional change of voltage in all the electrodes. The cathode and cathodic electrode are under the same potential with respect to the anode, simplifying the

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UDC: 621.38:62

ACC NR: AR7002223

design and the circuit controlling the beam current. With this design, the electron gun will produce a conic converging beam with a high current density. The results of experiments and welding conditions are presented. Orig. art. has: 1 figure and a bibliography of 2 titles. [Translation of abstract] [NT]

SUB CODE: 13, 07/

Card 2/2

ACC NR: AR7002221 (AN) SOURCE CODE: UR/0275/66/000/010/A011/A011

AUTHOR: Kaz'min, G. S.; Noskov, D. A.; Pankovets, N. G.; Sudakov, V. I.; Proskurovskiy, D. I.

TITLE: Electron-beam welding of leads in electrovacuum devices

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10A74

REF SOURCE: Tr. Tomskogo in-ta radioelektron. i elektron. tekhn., no. 4, 1965, 112-114

TOPIC TAGS: electron beam welding, tungsten ~~welding~~, nickel ~~welding~~, flux, ~~electron beam~~, ~~tungsten-nickel wire~~ *electrovacuum, electrovacuum equipment, weld evaluation*

ABSTRACT: An experimental investigation was made of electron-beam welding of leads in electrovacuum equipment, which were made of tungsten and nickel components. Acted upon by the accelerated and focused electron beam in vacuum, the tungsten component generates the heat which fuses the ends of the two wires. The leads are welded on an electron beam device. The components to be welded are fastened to a mandrel, placed in the operating chamber. During welding, the com-

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UDC: 621.3.032

ACC NR: AR7002221

ponents are brought to a distance at 0.2—0.3 mm. The nickel component is fed the tungsten component by a spring mounted on the mandrel. An unetched microscopic analysis 500X showed no defects in the weld. The weld was dense, without pores, cracks, and inclusions. [Translation of abstract]

[NT]

SUB CODE: 13/

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ACC NR: AR7002220

SOURCE CODE: UR/0275/66/000/010/A001/A001

AUTHOR: Noskov, D. A.; Ponomareva, L. P.; Sokolov, Yu. M.

TITLE: Testing of certain types of cathodes in near vacuum conditions

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10A2

REF SOURCE: Tr. Tomskogo in-ta radioelektron. i elektron. tekhn., no. 4, 1965, 90-94

TOPIC TAGS: cathode, tungsten cathode, betatron cathode, rhenium cathode, nickel cathode, lanthanum hexaboride cathode, ion bombardment, cathode emission

ABSTRACT: Three types of cathodes are analyzed: boride-lanthanite, oxide-thorium and a heater-baked cathode. Selection of the type is determined by its working conditions in a betatron injector. Requirements imposed on these cathodes are the following: high emission capacity; resistance to ion bombardment and contamination by residual gases; satisfactory operation under high voltage; mechanical strength and ease of operation; and long service life. Examination of

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UDC: 621.385.7

ACC NR: AR7002220

the influence of ion bombardment on lanthanite hexaboride cathodes has shown their stability to exceed considerably that of tungsten and rhenium. After the termination of the experiment, the boride-lanthanite cathode was kept in open air for 24 and 30 hours, after which its emission qualities were reexamined. The experiment showed that the cathodes fully recuperate their emission qualities and require no special activation. The strong heater current, which is the shortcoming of these cathodes, can be decreased by changing their dimensions or by indirect heating. The baked (impregnated) cathode, consisting of 70% nickel powder and 30% ternary carbonate, sintered with a nickel sublayer, is one of the cathodes most suitable for the betatron injector. Experiments show that the cathode completely recuperates its emission qualities after long exposure to the air and lengthy activation. Emission without additional activation decreases by a factor of two. Emission stability tests were conducted for 24 hours. At the end of the period, the emission was found to decrease by only 1%. The main qualities of this cathode are its high emission in pulsed conditions (30 amp/cm<sup>2</sup>) and its low working temperature (950 to 1200°K). The shortcoming of this cathode is the need to activate it after exposure to the open air, which makes its use rather difficult. The pressed oxide-thorium cathode is the strongest from the mechanical point of view. It is made of a sintered ceramic-metal mixture, pressed from

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thorium oxide with the addition of a refractory metal (molybdenum or tungsten). These cathodes are characterized by the absence of sparking, they are easily activated, show great resistance to deactivation by residual gases and ion bombardment, and have a very slow decay of emission during current takeoff. The capacity of the cathode to give a considerable emission in the pulse makes it possible for the cathode to work with pulses of long duration without a noticeable decay in the emission current, and also to work in large duty cycles. The influence of the degree of evacuation on the emission was tested. Readings were made of the emission characteristics at  $8 \cdot 10^{-5}$  mm Hg and  $2 \cdot 10^{-4}$  mm Hg. At  $8 \cdot 10^{-5}$  mm Hg, the emission qualities of the cathode did not change, and at  $2 \cdot 10^{-4}$  mm Hg, they changed insignificantly. The bibliography has 2 references. [Translation of abstract] [GC]

SUB CODE: 09/

Card 3/3

<sup>G</sup>  
MOSKOV, D., delegat XXI s"yezda Kommunisticheskoy partii Sovetskogo Soyuza,  
Geroy Sotsialisticheskogo Truda

This is where the savings are hidden. Sov.profsoiuzy 7  
no.4:10-11 Fe '59. (MIRA 12:5)

1. Master domernoy pechi Chusovskogo metallurgicheskogo zavoda.  
(Chusovoy--Metallurgy)